School-wide Positive Behavior Support and Response to Intervention: System Similarities, Distinctions, and Research to Date at the Universal Level of Support

Timothy J. Lewis, Barbara S. Mitchell, D. Tichelle Bruntmeyer and George Sugai

The logic of early intervention and prevention that pervades all of the chapters within this text was first used within the public health arena (Walker and Bullis 1991; Walker et al. 1996). The basic concept was to first prevent a specific health challenge, for example, skin cancer, through universal supports designed to reduce the overall incidence of cases (e.g., use of sun screen, hats). Secondary prevention/intervention is aimed at catching the first signs of the problem and implementing treatment right away (e.g., routine screening of skin moles and removing precancerous cells). Tertiary prevention focuses on stopping the disease and preventing other related health issues (e.g., chemotherapy to stop the spread of melanoma to other types of related cancers). Walker et al. (1996) were the first to apply the public health logic model to address high-risk students on a pathway to developing significant behavioral challenges.

Extending the work of Walker and colleagues beyond a specific focus on conduct disorders, School-wide Positive Behavior Supports (SW-PBS) was not only designed to address the continuum of social and emotional behavioral problems in school and extend the public health logic of both preventing challenging behavioral problems in school but also creating environments that increase the likelihood of those students identified with disabilities who experience success in mainstream instructional settings (Colvin et al. 1993; Lewis and Sugai 1999; Horner and Sugai 2005). While there are several similarities between response to intervention (RTI) and SW-PBS, such as data-based decision-making, building a continuum of supports, and working with teams of educators, there are also several distinctions that should be noted. First, unlike many academic behaviors that are occasioned by specific prompts, such as reading assigned texts or materials, and expected only when those prompts are present (i.e., child is directed to read text), educators "expect" students to "behave" across all school settings and under all possible conditions throughout the day (e.g., whole-class instruction, one-on-one, structured time, unstructured time, during free play). Second, for the majority of academic challenges, such as a student struggling to learn to read, the academic challenge typically has minimal impact on the overall learning environment. In other words, unlike the child who displays a high rate of acting out and disruptive behavior such as yelling profanities and throwing objects, the child who is struggling to read successfully a paragraph during silent reading will have little impact on other students' learning at that moment. Finally, school systems have long been set up whereby educators understand

T. J. Lewis (✉) · B. S. Mitchell · D. T. Bruntmeyer
University of Missouri, Columbia, USA
e-mail: lewistj@missouri.edu

G. Sugai
University of Connecticut, Storrs, USA

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the logic of increasing environmental supports to increase the likelihood of academic success. If an elementary teacher is asked what he or she would do if a student was struggling to learn to read, the teacher will most likely provide a long list of increasingly intensive and individualized instructional supports (e.g., one-on-one instruction, peer tutors, supplemental practice) along with a rich schedule of positive performance feedback recognizing any progress. Ask that same teacher what he or she would do if a student was disruptive in class, verbally aggressive, or simply noncompliant and the response will not follow the logic of increasing supports, rather, the typical focus will be on removing that child from the classroom (Bradley et al. 2004).

In this chapter, and the related chapter on small-group and individual behavioral supports, the emphasis on building strong systems whereby adult needs are given equal attention is evident and critical for success. In other words, an additional hallmark of SW-PBS is the great amount of attention given to educator supports recognizing that (a) most general educators and administrators have not received extensive training in how to provide social and emotional behavioral supports, (b) current school "discipline" systems are set up to remove students who present problems, not to "push in" supports to keep the child in the classroom, and (c) given the expectation that students display appropriate behavior from the moment they enter to the moment they exit the school building, success will require schoolwide systems that include all adults within the building. Therefore, the purpose of this chapter is to provide an overview of essential features of SW-PBS and review efficacy research conducted to date. This chapter provides an overview of the challenges students at risk for emotional behavioral problems present within educational settings, challenges all students face in schools with ineffective behavioral supports, and the essential environmental supports necessary to increase successful outcomes. Implications for research and practice are also discussed.

Behavioral Challenges in Schools

Recent episodes of extreme violence have prompted the reemergence of school safety as a top priority, and the current data on school crime provide evidence of this pressing need. For example, 85% of public schools recorded one or more crime incidents that took place during the school year 2009–2010 and 74% recorded one or more crimes that were violent (Robers et al. 2013). During the school year 2010–2011 there were 31 school-associated violent deaths, and approximately 1.2 million nonfatal victimizations, ranging from simple to serious assault, in school settings (Robers et al. 2013). Further during 2011, among youth aged 12–18 years, a greater number of students experienced crime at school (i.e., theft and violence) than away from school, representing an increase from the previous year (Robers et al. 2013). Data from students in grades 9 through 12 are particularly alarming, showing 7% of adolescents reported being threatened or injured with a weapon (e.g., gun, knife, or club) while on school property (Robers et al. 2013). Beyond the events of crime and violence, bullying behavior, acts of disrespect toward teachers, student racial/ethnic tensions, student sexual harassment of other students, gang activities, and widespread disorder in classrooms are also documented as the most frequently occurring problem behaviors in school settings (Robers et al. 2013). In response to these challenges, evidence also suggests an increase in the security measures schools enact. In 2011, 95% of students reported requirements for school visitors to sign in upon arrival, 77% reported the use of security cameras, and 70% reported security guards and/or police officers working in their schools (Robers et al. 2013).

While the majority of students will not experience exceedingly violent or aggressive events, student problem behavior consistently has been reported as one of the top concerns among educators (Rose and Gallup 2007; U.S. Department of Education 1998). Administrators and teachers report that responding to issues of school disci-

pline was one of the greatest demands of their time, cite problem behavior as interfering with instruction and learning, and report disruptive behavior as the most common reason for removal of students from classroom or school settings (Miller-Richter et al. 2012). For example, during the school year 2009–2010, 39% of public schools reported taking a serious disciplinary action against a student (Robers et al. 2013). Of the 433,800 serious disciplinary actions taken that year, 74% were multiday suspensions (i.e., 5 days or more), 20% included transfer of students to a specialized school, and 6% used removal from school, without access to services, for the remainder of the school year (Robers et al. 2013). Even more alarming, the fastest growing rate of suspensions and expulsions due to challenging behavior are occurring at the preschool level (Gilliam and Shabar 2006).

Undeniably, ensuring school safety and establishing a positive and productive learning environment is of utmost importance. At the same time, schools continue to be confronted with an ever-increasing complexity of student needs, above and beyond academic instruction. Prevalence estimates indicate that approximately 20% of the school age population currently experience a mental, emotional, or behavioral disorder with a majority of conditions emerging during the early years of learning (e.g., median age of onset age 6 for anxiety, 11 for behavior, 13 for mood, and 15 for substance abuse disorders; Merikangas et al. 2010). Yet, less than 1% of all students are identified as having an emotional/behavioral disorder (E/BD) and determined eligible to receive services within school settings (U.S. Department of Education, Office of Special Education Programs, 2011).

It is well documented that children and adolescents with mental, emotional, and/or behavioral challenges are at great risk for a host of increasingly negative outcomes that include: (a) inadequate engagement with school and learning reflected by poor attendance and difficulties establishing or maintaining appropriate relationships with teachers and peers (Lane et al. 2006; Merrell and Walker 2004; Wagner et al. 2005); (b) lower academic achievement than any other category of students with disabilities (U.S. Department of Education 2008); (c) limited graduation rates with more than half dropping out before completion (U.S. Department of Education 2004); and (d) increased risk for incarceration, substance abuse, unemployment, and suicide (Wagner et al. 2005). Related risk factors such as poverty, family disruption, child abuse or neglect, ineffective peer relationships, and community violence that contribute to poor psychological and school adjustment also have been identified clearly (National Research Council and Institute of Medicine (NRC & IOM) 2009).

Fortunately for educators and school support personnel, interventions for promoting social and emotional well-being, preventing the transition from "risk" to disorder, and lessening the intensity of impact of a disability are available (Lewis et al. 2010; Peacock Hill Working Group 1991; NRC & IOM 2009). However, current special education procedures for identification and intervention continue to be reactive rather than preventive (Gresham 2007; Maag and Katsiyannis 2008). For example, IDEA eligibility criteria require that students demonstrate patterns of problematic behavior to a "marked degree" and "over a long period of time" before an evaluation can be completed, diminishing the window of opportunity for early and successful intervention (Code of Federal Regulations, Title 34, Section 300.7(c)(4)(i)).

In summary, educators are faced with several behavioral challenges in schools. First, schools are confronting increasingly higher rates of aggressive and violent behavior and yet continue to rely on reactive strategies that largely involve exclusion, which has been documented as ineffective among high-risk students (Walker et al. 2004). Second, educators often are the first responders to significant mental and emotional student issues, but are poorly equipped to intervene and install supports across school settings. Finally, when educators exhaust what limited strategies they may have at their disposal and suspect a possible disability, the special education evaluation process itself necessitates that educators document student failure over time and to

a "marked degree" as a necessary component for eligibility under the category of EBD. The culmination of a slow-to-respond system of specialized supports, exclusion as the most frequently used intervention option, and environments unprepared to promote good mental and emotional health has resulted in the continued high-failure rate of students with, and at risk for, EBD (Bradley et al. 2004; Wagner et al. 2005).

Features of School-wide Positive Behavior Support

Similar to RTI, SW-PBS is best characterized as a problem-solving framework; it is not a curriculum, program, or intervention package (see the *Implementer's Blueprint* for a comprehensive overview of essential SW-PBS components; pbis.org). First, schools assemble a representative team that is tasked with development, implementation oversight, and maintenance and generalization of the SW-PBS process. The team must include an administrator and a cross section of faculty and staff within the building (e.g., grade level, specialists, staff). The first step in the SW-PBS process is to review existing data sources and complete a systems assessment to determine current behavioral challenges and the school's capacity to address the noted challenges (see Fig. 1). Data sources include behavioral and discipline infractions, in- and out-of-school suspensions, attendance, achievement, time out of instruction, and any other relevant archival data. Self-assessment tools such as the *Self Assessment Survey* (SAS; pbis.org) allow teams to evaluate what behavioral systems from school-wide to individual student support are currently in place and the degree to which the current systems are responsive to the unique challenges of the school.

Based on their data, SW-PBS teams identify evidence-based practices to put in place at the school-wide, nonclassroom (e.g., hallway, cafeteria), classroom, and individual student level. In concert with intervention selection, ongoing data sources are also identified to monitor intervention outcomes (see Fig. 1). Unlike traditional "packaged" programs, SW-PBS emphasizes a problem-solving framework to assist school teams in the selection of evidence-based behav-

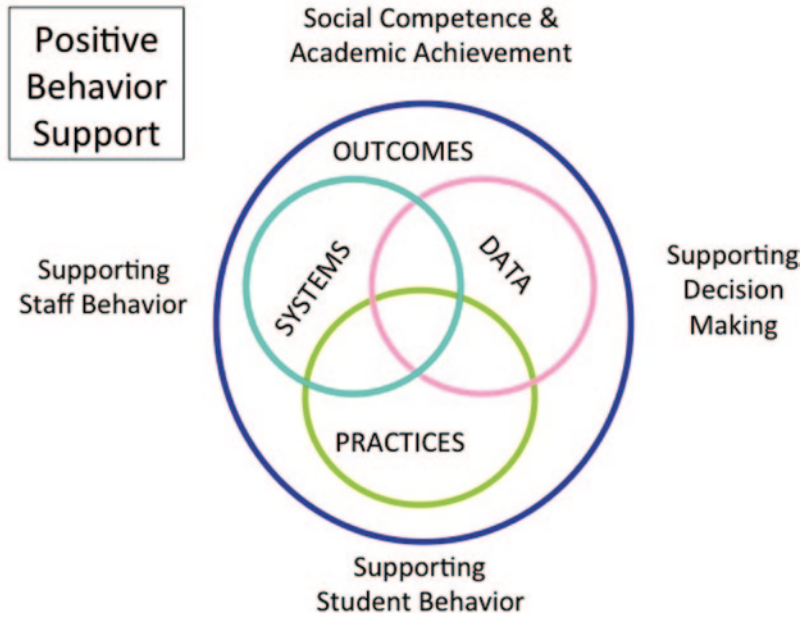

Fig. 1 School-wide positive behavior support (SW-PBS) problem-solving logic model. (Available from the Office of special education programs center on positive behavior interventions and supports; http://pbis.org)

ioral interventions and supports, matched to the presenting problems. In addition to clear empirical evidence demonstrating student outcome improvements for certain intervention practices, advocated practices within a SW-PBS framework build on an instructional model to capitalize on the common strength found across school staff; that is, teachers are recognized to have the ability to teach, provide practice opportunities, and provide specific feedback on skill use, including adaptive behavior skills (Sugai et al. 2000). Instructional targets within SW-PBS include (a) pro-social alternatives to noted problem behaviors, (b) specific behavioral challenges such as bullying, (c) cognitive strategies to address internalizing concerns such as anxiety, social-emotional development, and (d) overall physical and mental health and well-being. Key to successful implementation of SW-PBS practices is to ensure all staff within the school are fluent in implementation of selected strategies to promote high-implementation fidelity using operationalized training and ongoing technical assistance that includes performance feedback.

The final key element of SW-PBS is a clear and concerted focus on the necessary system supports to ensure fidelity of intervention implementation and accurate data collection for progress monitoring (see Fig. 1). The focus of SW-PBS is on creating environments to increase the likelihood students engage in appropriate social behavior across all school settings. Environments that increase the likelihood of appropriate social behavior are guided by a core curriculum that is implemented with consistency and fidelity that reflects the unique behavioral challenges and social context of the school (Lewis 2010). Therefore an essential task for the school team is to develop and implement training and technical assistance to assist all school personnel to successfully implement the social-behavioral curriculum and environmental supports. While the focus of SW-PBS is on student outcomes, the majority of the school team's time will be dedicated to supporting their colleague's implementation of practices and accompanying environmental supports (e.g., prompting skill use, providing specific feedback on correct and incorrect responding). Building on best practices noted within the professional development literature (e.g., Fixsen et al. 2005; Guskey 2000), SW-PBS through a network of school, district, regional, and state supports emphasizes the following key components in all professional development activities (see *Professional Development Blueprint*, pbis.org for more details):

- Readiness and prerequisite skills are addressed prior to training or technical assistance.
- Training and technical assistance is tailored to meet team needs.
- Long-term skill-based training is implemented with clear and measurable outcomes.
- Practice opportunities with coaching and performance feedback are provided.
- Professional networks are established to share strategies.

Focusing the necessary supports to promote systemic implementation across educators is critical to success and has led to the development of several fidelity measures including the *School-wide Evaluation Tool* (SET; Horner et al. 2004) and the *Benchmarks of Quality* (BoQ; Kincaid et al. 2010) measuring universal implementation, the *Benchmarks for Advanced Tiers* (BAT; Anderson et al. 2011) and the *Individual Student Systems Evaluation Tool* (ISSET; Anderson et al. 2011) which is appropriate for tiers 2 and 3.

SW-PBS, like RTI, also focuses on building an interconnected continuum of student supports through a multi-tiered continuum of increasing behavioral and academic supports (see Fig. 2). Initially, school teams use the problem-solving logic of SW-PBS (i.e., *data*-based decisions leading to the identification of *practice* and ensuring personnel can implement through *system* supports) to build universal supports designed to address the needs of all students across all school settings. Unlike academic multitiered systems of support whereby teams often adopt commercially available curricula (e.g., reading and math series) for tier 1, school teams must develop their social behavioral tier 1 program based on current problems and issues occurring in the school. Initially, school teams identify common and persistent behavior problems within their school (e.g., "noncompliance," "disrespect," "verbal aggres-

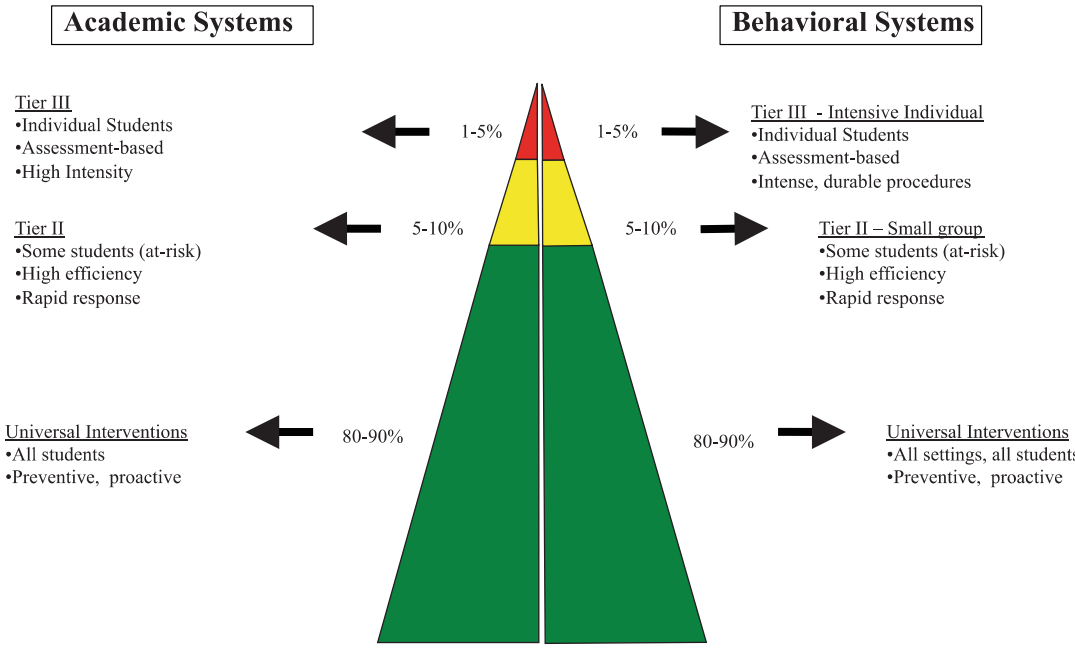

Fig. 2 The continuum of school wide positive behavior supports and response to intervention (RTI) academic supports. (Available from the Office of special education programs center on positive behavior interventions and supports; http://pbis.org)

sion," "bullying") using multiple data sources. For each problem identified, school teams define "replacement" pro-social skills. For every problem behavior, teams identify what students should "do instead." SW-PBS avoids common "codes of conduct" or "discipline policies" that outline what students should not do and the consequences if they are caught engaging in any of the behaviors. In relation to identifying specific replacement behaviors, school teams identify themes across replacement behaviors that are then translated into three to five broad rules (e.g., be respectful, be responsible, be a learner). Teams are tasked to identify replacement behaviors across all school settings, and then further identify specifics within key school settings for each broad rule (e.g., hallways, bathrooms, classrooms). The result is a matrix of desired school-based social skills that serves as that school's social behavior "scope and sequence" (see Fig. 3 for a sample SW-PBS matrix).

Once behavioral expectations are identified, the school is tasked with developing developmentally appropriate lesson plans to teach expectations, practice opportunities, and strategies to deliver positive-specific feedback when students display appropriate behavior. Social expectations are taught across the school year, follow effective instructional practices similar to academics, and are tailored to reflect student phases of learning (i.e., acquisition to fluency to maintenance and generalization). In addition to direct instruction of the locally developed core curriculum for social behaviors, school teams are also taught to view social behavior "learning errors" in the same vein as academics. Viewing less than perfect performance of desired social behaviors as an opportunity for learning requires a substantial shift among many adults in schools. SW-PBS encourages adults to move away from attempting to punish problem behavior and instead implement additional instructional and environmental support strategies to increase the likelihood of student mastery. When a student does not display the desired social behavior or exhibits disruptive behavior, this is viewed as an opportunity for adults in the student's environment to troubleshoot how the environment may have failed the

I am….	All Settings	Classroom	Hallways	Cafeteria	Bathrooms	Playground	Assemblies
Safe	• Keep bodies calm in line • Report any problems • Ask permission to leave any setting	• Maintain personal space	• Walk • Stay to the right on stairs • Banisters are for hands	• Walk • Push in chairs • Place trash in trash can	• Wash hands with soap and water • Keep water in the sink • One person per stall	• Use equipment for intended purpose • Wood chips are for the ground • Participate in school approved games only • Stay in approved areas • Keep body to self	• Walk • Enter and exit gym in an orderly manner
Respectful	• Treat others the way you want to be treated • Be an active listener • Follow adult direction(s) • Use polite language • Help keep the school orderly	• Be honest • Take care of yourself	• Walk quietly so others can continue learning	• Eat only your food • Use a peaceful voice	• Allow for privacy of others • Clean up after self	• Line up at first signal • Invite others who want to join in • Enter and exit building peacefully • Share materials • Use polite language	• Be an active listener • Applaud appropriately to show appreciation
A Learner	• Be an active participant • Give full effort • Be a team player • Do your job	• Be a risk taker • Be prepared • Make good choices	• Return to class promptly	• Use proper manners • Leave when adult excuses	• Follow bathroom procedures • Return to class promptly	• Be a problem solver • Learn new games and activities	• Raise your hand to share • Keep comments and questions on topic

Fig. 3 Sample matrix of social behavior expectations

child, so adjustments can be made to prevent the problem behavior in the future similar to a student making a math or reading "error."

Once the problem-solving logic of SW-PBS is implemented at the universal level and schools have effectively taught appropriate social behavior, have provided multiple opportunities for students to practice these new behaviors, and environmental supports have been adjusted to increase the likelihood of student success (e.g., increased proactive supervision, delivery of high rates of positive-specific praise or feedback acknowledging student mastery), school teams begin to implement additional tiers of support for students who are unsuccessful at tier 1. Tier 2 or small-group supports are designed for students who are not successful with universal supports alone. School teams develop data-based decision rules and other strategies including screening and teacher referral to catch "non-responders" early and prevent disruptive behaviors from becoming chronic and intense (see Chap. 31 for an overview of Tier 2/3 SW-PBS). Tier 2 strategies within an SW-PBS framework include additional small-group social skill instruction, self-management, and academic supports. For those students who do not respond to tier 2 supports, or in instances where problem behaviors are intensive and chronic, tier 3 or individualized supports are implemented. At the tier 3 level, a functional behavioral assessment is conducted to design an instruction-based behavioral intervention plan. Community, mental health, and specialized instructional supports and related services are also included at the tier 3 level when indicated.

At each tier, the central features of SW-PBS are repeated: (a) identify the problem/concern through data, (b) identify the desired pro-social replacement skill, (c) explicitly teach the skill, and (d) alter the environment to build in necessary supports to increase the likelihood of student success. As students require increasing intensive

Table 1 Phases of implementation of SW-PBS within each tier of support[a]

Focus	Stage	Description
Should we do it?	Exploration/adoption	School/district commits to adopting SW-PBS and building systems to support implementation
Work to do it right	Installation	School/district sets up infrastructure to implement SW-PBS (e.g., forms leadership team, conducts assessment, creates action plan)
	Initial implementation	Team starts in a specific school setting or focuses on key behavioral targets, implements evidence-based practices and develops supporting systems
Work to do it better	Elaboration	Team expands practices and systems to develop a comprehensive tier of support based on a continuous review of student outcome and fidelity of practice data
	Continuous improvement/ regeneration	Team reviews multiple data sources, eliminates inefficiencies and expands effective strategies within the tiered level of support

[a] Based on work by Fixsen et al. 2005 and Goodman 2013

supports to be successful, often staff will require a higher level of training and technical assistance to implement more intensive supports and interventions. Similar to academic systems of RTI, one key to system success is a school- and district-wide emphasis and focus on SW-PBS, aligning training and technical assistance needs to local school data. The quality of core or universal instruction influences the percentage of students who will experience success without additional intervention, and systematically influences the effects of increasingly intensive layers of intervention (Algozzine et al. 2011; Bradshaw et al. 2010; Putnam et al. 2002). An equally important component in building a continuum of student supports for academic and social behavior is carefully monitoring school readiness features with respect to each phase of implementation (Fixsen et al. 2005). In the initial implementation of universal supports, schools move through a predictable set of steps or phases from exploration to adaptation (see Table 1). Likewise, once schools reach mastery and implement universal strategies with high fidelity (e.g., reach 80% or better on the *School-wide Evaluation Tool*), they once again start at the initial phase at the start of tier 2 implementation and again at tier 3 implementation. Similar to the development of universal supports, descriptive data indicate the development and full implementation of subsequent tiers takes 1–2 years.

SW-PBS as Early Intervention/ Prevention

To date, the majority of development, research and evaluation efforts of SW-PBS have been conducted at the universal level with an eye toward implementation of previously validated practices designed to prevent problem behavior and increase the likelihood of students with disabilities and those at high risk experience success (Lewis et al. 2010). In addition, as described above, it is not sufficient to provide limited or pull-out exposure to evidence-based practices, the entire school environment should be redesigned to create a seamless continuum of supports. Such an approach necessitates that educators change their views and practices regarding the prevention and management of disruptive behavior in schools. Over 20 years ago a group of distinguished scholars in the field of Emotional/Behavioral Disorders put forth a compendium of best practices, along with the necessary environmental supports, which unfortunately were never fully implemented in the years since due in large part to absence of systemic changes in how services are delivered in schools (Peacock Hill Working Group 1991). SW-PBS, along with RTI on the academic side of the continuum, provides educators with the framework to implement best practices and create instructional environments to fully implement evidence-based practices through comprehensive

system changes in how education is delivered across general and special education.

Over the past 15 years, a clear body of research has emerged documenting the prevention/early intervention effect of universal supports. Quasi-experimental and descriptive studies have shown schools can: (a) effectively and efficiently reduce the overall rates of problem behavior from preschool to high school (Barrett et al. 2008; Bohanon et al. 2006; Chapman and Hofweber 2000; Curtis et al. 2010; Duda et al. 2004; Farkas et al. 2012; Lohrmann-O'Rourke et al. 2000; Nelson et al. 1998; Putnam et al. 2002; Simonson et al. 2010), (b) improve academic outcomes through improvements in behavioral supports (Algozzine et al. 2011; Luiselli et al. 2005; McIntosh et al. 2006; 2008a, b, 2012), and (c) improve classroom and non-classroom outcomes by targeting specific SW-PBS strategies in those settings (De Pry and Sugai 2002; Hirsch et al. 2004; Lewis et al. 2000, 2002; Putnam et al. 2003; Stichter et al. 2006). Several recently conducted randomized controlled trial studies have confirmed previous outcomes including positive sustained changes in school discipline practices that result in decreases in problem behavior and increases in appropriate behavior (Bradshaw et al. 2008b, 2010, Horner et al. 2009), overall school climate improvements (Bradshaw et al. 2008a, 2009), and the reduction of specific behavioral challenges (Bradshaw et al. in press; Waasdorp et al. 2012) with moderate effect sizes across each targeted outcome.

SW-PBS as Behavioral RTI Within the Special Education Eligibility Process

The development and evaluation of SW-PBS predates the recent reauthorization of IDEA that allowed the use of academic RTI as one facet of eligibility determination within the category of Specific Learning Disabilities (LD; IDEA 2004). While the major focus of SW-PBS has been on prevention, early intervention, and altering instructional environments to maximize behavioral intervention effectiveness, recent work has called for a move from the largely medical model of evaluation to determine student eligibility within the category of "Seriously Emotionally Disturbed" (SED; Lewis et al. 2010; Maag and Katsiyannis 2008; Merrell and Walker 2004; Mathur 2007). Over two decades ago, a group of education, mental health, and other related professionals proposed the first significant changes to the SED definition and evaluation process. These scholars advocated for a broader evaluation process that examined behavioral functioning across multiple settings in addition to reviewing data on how students responded to behavioral supports suitable for implementation in the general education environment (Forness and Knitzer 1992).

Unfortunately, the proposed EBD definition and evaluation process that was better suited to an instructional or educational framework did not make it into the reauthorization of IDEA in 2004. However, recent calls to consider response or "non-response to interventions" implemented with fidelity, in addition to other evaluation data sources (e.g., rating scales, academic testing) and evaluation processes (e.g., ruling out possible causes), continues to be advocated in the professional literature especially in light of the under-identification of children and youth within the SED category (Cheney et al. 2008; Fairbanks et al. 2007; Gresham 2007; Hawken et al. 2008; Lewis et al. 2010; Maag and Katsiyannis 2008). As stated at the outset of this chapter, while the parallel process of examining nonresponse data to intervention within the context of comprehensive multi-tiered systems of support as one source of evidence of a possible SED, similar to the present work in SLD, has the potential to provide individualized more intensive supports and avoid the current "wait to fail" model. However, the complex interactive nature of social behavior across all school settings does not lend itself to a quick benchmark measure that can be monitored across a targeted intervention within one or two academic settings or conditions. Rather, the knowledge-base at this point suggests that nonresponse data should be viewed as one component of the overall evaluation process necessitating

that additional data sources, such as parent interviews or teacher-rating scales, should continue to be an essential component of the evaluation process (Kauffman et al. 2009). In addition, student nonresponse data to interventions as a facet of the special education eligibility process will be valuable only to the degree the evaluation team has confidence the prior interventions were: (a) evidence-based with clear demonstration of effect on other children or youth with emotional or behavior problems, (b) matched to student need based on a clear data-based process, (c) were implemented with integrity over a sufficient period of time, and (d) the progress monitoring data were clearly operationally defined and collected consistently across all staff in the school. At present, these criteria are not routinely met in the majority of schools in the USA. At present, a hybrid of social-behavioral RTI combined with traditional evaluation data (e.g., rating scales, archival review, direct observations) is warranted in the determination of SED (Gresham 2005, 2007; Kauffman et al. 2009; Lewis et al. 2010).

Implications for Research

While the emerging evidence base of descriptive, quasi-experimental, and experimental research has provided a solid knowledge base on the impact of SW-PBS universal supports, several lines of research are still needed. First, while overall impact on behavior across all students has been well documented, it is unknown what impact universal programs and the complete continuum of multi-tiered supports have on high-risk students with respect to maintenance and generalization of student behavior change. While the component practices within SW-PBS have a long history of demonstrating student outcomes, the added value of implementation within the SW-PBS framework is unknown. Second, additional research is needed on tier 2 intervention efficacy again with an eye toward embedding practices within a full continuum (Bruhn et al. 2013; Mitchell et al. 2012). Third, ongoing research is needed on the systems of support needed to achieve fidelity and maintain implementation of SW-PBS over time (McIntosh et al. 2013). Finally, as the RTI knowledge base continues to expand with respect to both the early intervention and the special education eligibility process, companion work examining the feasibility, including validated prescriptive measures to target tiered supports will be a valuable addition to the knowledge base. For example, the utility of using brief universal social/emotional screening measures to identify at-risk students paired with brief measures of social/emotional ability to guide tier 2 intervention selection prior to problem behaviors becoming chronic and more intense similar to a curriculum-based measure to screen for academic risk and match student to more intensive supports would be an important addition to the SW-PBS knowledge-base (Chafouleas et al. 2013; Kilgus 2013; Kilgus et al. 2013).

Implications for Practice

The clear and widely established impact of SW-PBS universal practices on improved climate, reductions of problem behavior, increases of appropriate social behavior, improved academic performance, reductions of specific behavioral challenges such as bullying, and the improved overall social-emotional well being of students provides a compelling rationale for schools to implement SW-PBS as prevention/early intervention. It is premature to advocate for SW-PBS as part of a social behavioral RTI process to determine student eligibility for special education under IDEA. However, engaging in a process of early intervention and clearly matching behavioral supports to student need and carefully monitoring progress and altering environments to increase the likelihood of success will allow educators to (a) address student need in a more timely systemic manner and (b) provide intervention response data to assist in more comprehensive special education evaluations when appropriate. Using the landmark recommendations of the Peacock Hill Working Group (1991) for implementation of evidence-based practices for at-risk students and those with EBD along with potential points in creating a social behavioral RTI logic for special education eligibility, Table 2

Table 2 Recommended prevention/early intervention and evaluation through response to intervention (RTI) strategies and essential features of school-wide positive behavior support (SW-PBS)

Recommended social behavior evidence-based practices[a]	Response to intervention as best practice and potential evaluation framework	School-wide positive behavior support essential features
Use of systematic, data-based interventions	Consistent implementation of core curriculum. Additional research-validated instruction based on student need	Universal: School team develops social behavior expectations based on presenting problems, explicitly teaches expectations across all staff and settings, and provides corrective and positive-specific feedback across multiple opportunities to practice Tiers 2 and 3: Social skills instruction, self-management, cognitive-behavioral interventions, academic supports, individualized behavior plans based on a functional behavioral assessment
Continuous assessment and monitoring of progress	Quarterly to weekly probes, group data aggregated to examine overall student progress, individual data visually analyzed for trend and progress	Universal: Multiple data sources examined to identify behavioral needs and to monitor progress for all students, settings, and staff Tiers 2 and 3: Data-decision rules established to identify students who require additional supports including screening and teacher referral. Individual student data visually analyzed for trend and progress. Cross student data evaluated to create system efficiencies
Provision for practice of new skills	Core curriculum plus dedicated intervention time for tiers 2 and 3	Universal: Development of a year-long instructional plan where ALL school staff teach, build in practice opportunities across settings, and provide high rates of specific positive praise. Lessons taught within and across all school settings Tiers 2 and 3: All small group and individual strategies connected and aligned to universal expectations and strategies to promote maintenance and generalization
Treatment matched to problem	Benchmark tests linked to level of support, and nonresponders receive more intensive support	Universal social-behavior curriculum annually reviewed and updated based on data, teacher, and student input. Data-based decision-making to match tier II and III supports to function and/or problem type of students
Multicomponent treatment	Core curriculum incorporates effective instruction and scaffolds prior learning. Tiers 2 and 3 provide additional and/or more intensive instructional support	Continuum of supports whereby all students receive universal supports (instruction plus practice with feedback); Tiers 2 and 3 support varied based on student need and guided by assessment. Connections to mental health and other student and family support agencies also included when indicated
Programming for transfer and maintenance	Core curriculum plus additional supports should lead to student fluency within academic skill allowing natural maintenance and generalization opportunities	Linking all tiers 2 and 3 support to universals provides a school-wide environment that incorporates instruction, practice opportunities, and feedback on student use of pro-social skills allowing natural maintenance and generalization opportunities
Commitment to sustained intervention	Overall achievement data guide curriculum and instructional strategies	School and district leadership teams commit to a multiyear process. Team action plans reflect short- and long-term goals
Long term, multilevel approaches to address the issue or problem	Core curriculum plus differentiated linked instruction in place across school year. Students have access to tiers 2 and 3 support at first signs and confirmation of nonresponse	School teams supported by district, region and state SW-PBS supports, school improvement plans include social-behavioral targets, district improvement plans support school social-behavioral targets, linkages to multiagencies along the continuum of supports through logical and strategic connect points established

[a] Peacock Hill Working Group 1991

provides a summary of related SW-PBS practices that allow school teams to build state-of-the art school-wide systems of positive behavior support and increase the likelihood of student success.

While the challenges of students at-risk and those displaying chronic and intense behavioral problems in schools are many, and the outcomes of past, specialized interventions for those students identified with an EBD are bleak, the importance of addressing early patterns of behavioral risk to reduce the unfortunate trajectory of more chronic and intense social/emotional problems is an essential component of education today (Lewis et al. 2010). While typically requiring multiple years to build a complete continuum of behavioral supports through the problem-solving framework of SW-PBS, the documented multiple student and staff benefits certainly justify the investment. As reported above, SW-PBS has documented: (a) improvements in both social and academic behavior among students, (b) reduction in the numbers of students "at-risk," (c) increased staff job satisfaction and (d) overall improvements in school climate. Over time, as educators build a continuum of behavior supports, fewer students display problem behavior within the classroom allowing educators more time to teach and fewer students require more intensive and individualized supports reducing the burden on administrators and specialists (Lewis et al. 2011). While there is no panacea to reduce all behavioral problems and associated risk, adopting a behavioral response to intervention framework, educators can be successful in improving the lives of their students.

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